MATH STUDY TASKS

The following Math study tasks were designed to be helpful tools to use when studying the conflict in Northern Ireland. They were not designed to be a standalone unit or a daily lesson plan. They are meant to be used in conjunction with lesson plans to study the conflict. For instance when learning about parades and bonfires on the 12th of July, a teacher could use the bonfire tasks for the students to have a better understanding of the size or dimensions of the bonfires that are built each year.

MATH STUDY TASK 1
The bonfire structure above is typically used in a large area where the heat will not cause problems for buildings and property. The structure is created by piling wood palets end to end in a circle to form the base then continue upward. You can see a palet in the foreground. To find the volume of this bonfire the structure is divided into 2 cylinders, the upper and the lower. The bottom cylinder is approximately 10 ‘ in height and a radius of 20’. The top cylinder 20’ in height and a radius of 15’. Use the formula for each cylinder then combine to compute the total volume. \[ V=\pi r^2 h \]. A cord of wood is 4’x4’x8’ = 128 cu.ft.. How many cords of wood would fill this space?

MATH STUDY TASK 2

Death by postcode booklet launched

The Ann Brown Trust at Farset recently published its report on health inequalities in communities in Belfast called ‘Death by Postcode’, in the Long Gallery at Parliament Buildings. Speaking at the launch Barney McCaughey, Chairman of the Ann Brown Trust at Farset, said: ‘the Death by Postcode report demonstrates that we need a range of people involved in tackling inequalities – and no one government department or organisation can tackle the issue alone. Ministers and elected representatives need to work and talk together and that is still a step beyond where they seem to be. The report also recommends that government and statutory agencies recognise the key role that local communities and organisations play in reducing health inequalities, and work in partnership with them to identify issues, plan programmes and take decisions jointly. In turn community organisations should also recognise the role that government agencies can play in supporting them.”

Dr. Eddie Rooney, Chief Executive of the Public Health Agency added, ‘There is now an extensive body of evidence which shows that there is a huge gap in health and well being across communities in Northern Ireland. The time has now come to focus on the actions that will break the cycle of health inequalities. This work has begun with the publication of the first joint regional PHA/HSCB commissioning plan which will drive a shift to preventative work on smoking, alcohol and obesity. The PHA will also strengthen the partnership working with voluntary and community organisations, and with other
public sector bodies, to tackle the root causes of health inequalities. Some of the startling facts highlighted in the report included some of the most common characteristics associated with being born into poverty as opposed to more affluent circumstances are:

- You are 40% more likely to die before the age of 75
- You are 5 times more likely to die of drug or alcohol related diseases
- You are 3 times more likely to be a parent before you are 20
- You are twice as likely to die of a smoking related disease or lung cancer
- You are likely to die 7 years earlier than someone from a less deprived area
- You are 3 times more likely to take your own life by suicide
- There are some 4,000 premature deaths in Northern Ireland per annum

As we look at this article, we see the important content is the statistics that are given to show there is a direct correlation between where you live in Belfast area and rates of alcoholism, lung disease and other life issues. To fully understand the points that are being made, we need to understand the math behind stats.

If we look at the first statement; “You are 40% more likely to die before the age of 75. “ I am going to estimate that the typical person living in Ireland had a 50% chance to live to 75, this estimate gives numbers to compare and to demonstrate. It would mean 50% of the people live to be 75 and 50% die before reaching 75. When it is stated “you are 40% more likely to die” that would mean 90% never live to be 75. Put another way only 10% of people living in this area would live to reach 75. This is quite a contrast based on geography.

If we look at “You are 5 times more likely to die of drug or alcohol related diseases." In the Northern Ireland the rate alcohol/drug related deaths are 13.6 for every 100,000 deaths, 13.6 are alcohol/drug . If I lived in certain parts of Belfast for every 100,000 deaths there would be 68 deaths relating to alcohol.

In groups of three, using your computers to research the statistics, write up each of the other statements. For instance how many people in Northern Ireland die from
smoking and/or lung cancer? Then using the statement double that: to give you certain parts of Belfast.